

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

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1. (currently amended): A method for providing load information for one or more data streams within a network having a plurality of ingress routers, a plurality of core routers, and a plurality of egress routers, the method comprising:

receiving a plurality of packets into a selected ingress router, each packet belonging to a selected one of a plurality of service classes and the packets being transmitted to a particular destination;

metering a load value for each service class ~~and the particular destination~~ of at least one of the packets, the load value corresponding to an actual amount of demand for each service class; and

periodically transmitting one or more tickets to the destination to indicate the load value for each of the one or more service classes.

2. (original): A method as recited in claim 1, wherein the destination is a selected one of the egress routers.

3. (original): A method as recited in claim 1 wherein the one or more tickets indicate a total number of streams for each class that is being transmitted to the destination.

4. (original): A method as recited in claim 3, wherein each ticket indicates a total number of streams for a particular class that are being transmitted to the destination.

5. (original): A method as recited in claim 3 wherein each ticket indicates a single stream for a particular class that is being transmitted to the destination.

6. (original): A method as recited in claim 3, wherein the tickets and the streams represented by the tickets are being transmitted to the same destination.

7. (original): A method as recited in claim 1, wherein one or more tickets are only transmitted for a particular class when the load value has changed for such service class.

8. (original): A method as recited in claim 1 wherein one or more tickets are transmitted after a predetermined amount of time.

9. (original): A method as recited in claim 1 wherein the one or more tickets are sent to a selected core router and configured to allow the selected core router to dynamically allocate resources based on the current load of each class.

10. (original): A method as recited in claim 9 wherein the tickets facilitate assured forward routing and differentiated services performed by the core router.

11. (currently amended): A router for providing load information for one or more data streams within a network having a plurality of ingress routers, a plurality of core routers, and a plurality of egress routers, the router comprising:

a memory; and

a processor coupled to the memory,

wherein at least one of the memory and the processor are adapted to provide:

receiving a plurality of packets, each packet belonging to a selected one of a plurality of service classes and the packets being transmitted to a particular destination;

metering a load value for each service class ~~and the particular destination~~ of at least one of the packets, the load value corresponding to an actual amount of demand for each service class; and

periodically transmitting one or more tickets to the destination to indicate the load value for each of the one or more service classes.

12. (original): A router as recited in claim 11, wherein the destination is a selected one of the egress routers.

13. (original): A router as recited in claim 11 wherein the one or more tickets indicate a total number of streams for each class that is being transmitted to the destination.

14. (original): A router as recited in claim 13, wherein each ticket indicates a total number of streams for a particular class that are being transmitted to the destination.

15. (original): A router as recited in claim 13 wherein each ticket indicates a single stream for a particular class that is being transmitted to the destination.

16. (original): A router as recited in claim 13, wherein the tickets and the streams represented by the tickets are being transmitted to the same destination.

17. (currently amended): A ~~method~~router as recited in claim 11, wherein one or more tickets are only transmitted for a particular class when the load value has changed for such service class.

18. (currently amended): A ~~method~~router as recited in claim 11 wherein one or more tickets are transmitted after a predetermined amount of time.

19. (currently amended): A ~~method~~router as recited in claim 11 wherein the one or more tickets are sent to a selected core router and configured to allow the selected core router to dynamically allocate resources based on the current load of each class.

20. (currently amended): A ~~method~~router as recited in claim 19 wherein the tickets facilitate assured forward routing and differentiated services performed by the core router.

Subs
C1
21. (currently amended): A computer readable medium containing programming instructions for providing load information for one or more data streams within a network having a plurality of ingress routers, a plurality of core routers, and a plurality of egress routers, the computer readable medium comprising:

computer code for receiving a plurality of packets into a selected ingress router, each packet belonging to a selected one of a plurality of service classes and the packets being transmitted to a particular destination;

computer code for metering a load value for each service class ~~and the particular destination~~ of at least one of the packets, the load value corresponding to an actual amount of demand for each service class; and

computer code for periodically transmitting one or more tickets to the destination to indicate the load value for each of the one or more service classes.

22. (currently amended): A method for allocating resource to one or more data streams within a network having a plurality of ingress routers, a plurality of core routers, and a plurality of egress routers, the method comprising:

receiving one or more tickets into a selected core router, the tickets indicating a total load for each one of a plurality of service classes, the total load corresponding to an actual amount of demand for each one of the plurality of service classes; and

dynamically allocating resources to a plurality of streams within each service class based on the one or more received tickets.

23. (original): A method as recited in claim 22, wherein the tickets indicate a total number of streams being transmitted to the selected core router for each class.

24. (previously presented): A method for allocating resource to one or more data streams within a network having a plurality of ingress routers, a plurality of core routers, and a plurality of egress routers, the method comprising:

receiving one or more tickets into a selected core router, the tickets indicating a total load for each one of a plurality of service classes; and

dynamically allocating resources to a plurality of streams within each service class based on the one or more received tickets, wherein the resources are allocated by:

calculating a total controlled resource allocation per class;

calculating a resource remainder; and

allocating the resource remainder to the streams of each class based on the calculated total controlled resource allocation for the each class.

25. (original): A method as recited in claim 24, wherein the total controlled resource allocation for a particular class is equal to an assigned resource allocation for each stream within the particular class times a total number of streams within the particular class and the resource remainder is equal to a total available bandwidth minus the total controlled resource allocation for all of the classes.

26. (original): A method as recited in claim 24, wherein a portion of the resource remainder is allocated to a particular class and the portion is proportionate to a ratio of the total controlled resource allocation for the particular class divided by the total controlled resource allocation for all classes.

27. (currently amended): A router for allocating resource to one or more data streams within a network having a plurality of ingress routers, a plurality of core routers, and a plurality of egress routers, the router comprising:

a memory; and

a processor coupled to the memory,

wherein at least one of the memory and the processor are adapted to provide:

receiving one or more tickets into the router, the tickets indicating a total load for each one of a plurality of service classes, the total load corresponding to an actual amount of demand for each one of the plurality of service classes; and

dynamically allocating resources to a plurality of streams within each service class based on the one or more received tickets.

28. (currently amended): A computer readable medium containing programming instructions for allocating resource to one or more data streams within a network having a plurality of ingress routers, a plurality of core routers, and a plurality of egress routers, the computer readable medium comprising:

computer code for receiving one or more tickets into a selected core router, the tickets indicating a total load for each one of a plurality of service classes, the total load corresponding to an actual amount of demand for each one of the plurality of service classes; and

computer code for dynamically allocating resources to a plurality of streams within each service class based on the one or more received tickets.

29. (new): A computer readable medium as recited in claim 21, wherein the destination is a selected one of the egress routers.

30. (new): A computer readable medium as recited in claim 21, wherein the one or more tickets indicate a total number of streams for each class that is being transmitted to the destination.

31. (new): A computer readable medium as recited in claim 30, wherein each ticket indicates a total number of streams for a particular class that are being transmitted to the destination.

32. (new): A computer readable medium as recited in claim 30, wherein each ticket indicates a single stream for a particular class that is being transmitted to the destination.

33. (new): A computer readable medium as recited in claim 30, wherein the tickets and the streams represented by the tickets are being transmitted to the same destination.

34. (new): A computer readable medium as recited in claim 21, wherein one or more tickets are only transmitted for a particular class when the load value has changed for such service class.

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35. (new): A computer readable medium as recited in claim 21, wherein one or more tickets are transmitted after a predetermined amount of time.

36. (new): A computer readable medium as recited in claim 21, wherein the one or more tickets are sent to a selected core router and configured to allow the selected core router to dynamically allocate resources based on the current load of each class.

37. (new): A computer readable medium as recited in claim 36, wherein the tickets facilitate assured forward routing and differentiated services performed by the core router.

Subs
C1
38. (new): A router as recited in claim 27, wherein the tickets indicate a total number of streams being transmitted to the selected core router for each class.

39. (new): A router as recited in claim 27, wherein the resources are allocated by:
calculating a total controlled resource allocation per class;
calculating a resource remainder; and
allocating the resource remainder to the streams of each class based on the calculated total controlled resource allocation for the each class.

Subs C1
40. (new): A router as recited in claim 39, wherein the total controlled resource allocation for a particular class is equal to an assigned resource allocation for each stream within the particular class times a total number of streams within the particular class and the resource remainder is equal to a total available bandwidth minus the total controlled resource allocation for all of the classes.

41. (new): A router as recited in claim 39, wherein a portion of the resource remainder is allocated to a particular class and the portion is proportionate to a ratio of the total controlled resource allocation for the particular class divided by the total controlled resource allocation for all classes.

Subs C1
42. (new): A computer readable medium as recited in claim 28, wherein the tickets indicate a total number of streams being transmitted to the selected core router for each class.

43. (new): A computer readable medium as recited in claim 28, wherein the resources are allocated by:

calculating a total controlled resource allocation per class;

calculating a resource remainder; and

allocating the resource remainder to the streams of each class based on the calculated total controlled resource allocation for the each class.

Subs C1
44. (new): A computer readable medium as recited in claim 43, wherein the total controlled resource allocation for a particular class is equal to an assigned resource allocation for each stream within the particular class times a total number of streams within the particular class and the resource remainder is equal to a total available bandwidth minus the total controlled resource allocation for all of the classes.

45. (new): A computer readable medium as recited in claim 43, wherein a portion of the resource remainder is allocated to a particular class and the portion is proportionate to a ratio of the total controlled resource allocation for the particular class divided by the total controlled resource allocation for all classes.

46. (new): An apparatus for providing load information for one or more data streams within a network having a plurality of ingress routers, a plurality of core routers, and a plurality of egress routers, the apparatus comprising:

means for receiving a plurality of packets into a selected ingress router, each packet belonging to a selected one of a plurality of service classes and the packets being transmitted to a particular destination;

means for metering a load value for each service class of at least one of the packets, the load value corresponding to an actual amount of demand for each service class; and

means for periodically transmitting one or more tickets to the destination to indicate the load value for each of the one or more service classes.

47. (new): An apparatus for allocating resource to one or more data streams within a network having a plurality of ingress routers, a plurality of core routers, and a plurality of egress routers, the apparatus comprising:

means for receiving one or more tickets into a selected core router, the tickets indicating a total load for each one of a plurality of service classes; and

means for dynamically allocating resources to a plurality of streams within each service class based on the one or more received tickets, wherein the resources are allocated by:

calculating a total controlled resource allocation per class;

calculating a resource remainder; and

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allocating the resource remainder to the streams of each class based on the
calculated total controlled resource allocation for the each class.
